

WHAT IS CLAIMED IS:

1. An electronic battery tester for testing a storage battery comprising:

a first Kelvin connection configured to electrically couple to a first terminal of the battery;

a second Kelvin connection configured to electrically couple to a second terminal of the battery;

a probe light configured to couple to at least one of the first and second Kelvin connections; and

battery test circuitry configured to measure a parameter of the battery through the first and second Kelvin connections.

2. The apparatus of claim 1 wherein the parameter of the battery is a dynamic parameter.

3. The apparatus of claim 2 wherein the battery test circuitry comprises:

a forcing function configured to apply a time varying signal to the battery through the first and second Kelvin connections; and

a microprocessor configured to test the storage battery as a function of the dynamic parameter measured through the

first and second Kelvin connections in response to the applied time varying signal.

4. The apparatus of claim 1 wherein the probe light is configured to mechanically couple to the at least one of the first and second Kelvin connections.

5. The apparatus of claim 1 wherein the probe light is configured to electrically couple to the at least one of the first and second Kelvin connections.

6. The apparatus of claim 1 wherein the probe light is configured to couple to the at least one of the first and second Kelvin connections via probe extensions.

7. The apparatus of claim 1 wherein the probe light is powered by at least one battery.

8. The apparatus of claim 7 wherein the at least one battery is at least one non-rechargeable battery.

9. The apparatus of claim 8 wherein the at least one non-rechargeable battery is selected from the group consisting of lithium coin cells, AAA and AA batteries.

10. The apparatus of claim 7 wherein the at least one battery is at least one rechargeable battery.

11. The apparatus of claim 10 wherein the at least one rechargeable battery is a part of power control circuitry of the probe light, and wherein the power control circuitry receives a charge signal for charging the at least one rechargeable battery from a battery under test.

12. The apparatus of claim 1 wherein the probe light is configured to receive power from the battery test circuitry.

13. The apparatus of claim 1 further comprising an input, coupled to the test circuitry, through which the probe light can be turned on and off.

14. The apparatus of claim 1 further comprising a probe light-to-cable connector configured to couple the probe light to the at least one of the first and second Kelvin connections.

15. The apparatus of claim 14 wherein the probe light-to-cable connector comprises pieces of Velcro.

16. The apparatus of claim 14 wherein the probe light-to-cable connector comprises a double-sided adhesive tape.

17. The apparatus of claim 14 wherein the probe light-to-cable is a loop configured to fit around a cable including the at least one of the first and second Kelvin connections.

18. The apparatus of claim 17 wherein the loop is formed integral with a housing of the probe light.

19. The apparatus of claim 17 wherein the loop is formed of plastic.

20. The apparatus of claim 14 wherein the probe light-to cable connector comprises a Velcro strap configured to attach to a housing of the probe light and to wrap around a cable including the at least one of the first and second Kelvin connections.

21. The apparatus of claim 14 wherein the probe light-to-cable connector comprises male and female plug fittings.

22. The apparatus of claim 1 wherein the probe light comprises a light bulb.

23. The apparatus of claim 22 wherein the light bulb is selected from the group consisting of incandescent lamps and cold-cathode lamps.

24. The apparatus of claim 22 wherein the light bulb receives power from at least one capacitor.

25. A method of testing a battery comprising:  
    (a) coupling a first Kelvin connection to a first terminal of the battery;  
    (b) coupling a second Kelvin connection to a second terminal of the battery;  
    (c) coupling a probe light to at least one of the first and second Kelvin connections;  
    (d) measuring a parameter of the battery through the first and second Kelvin connections.

26. The method of claim 23 wherein the probe light is powered by at least one battery.

27. The method of claim 23 wherein step (d) is carried out by battery test circuitry, and wherein the probe light is configured to receive power from the battery test circuitry.